

Increasing SAT Participation Rate in Wisconsin

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By Group 5, DSI13

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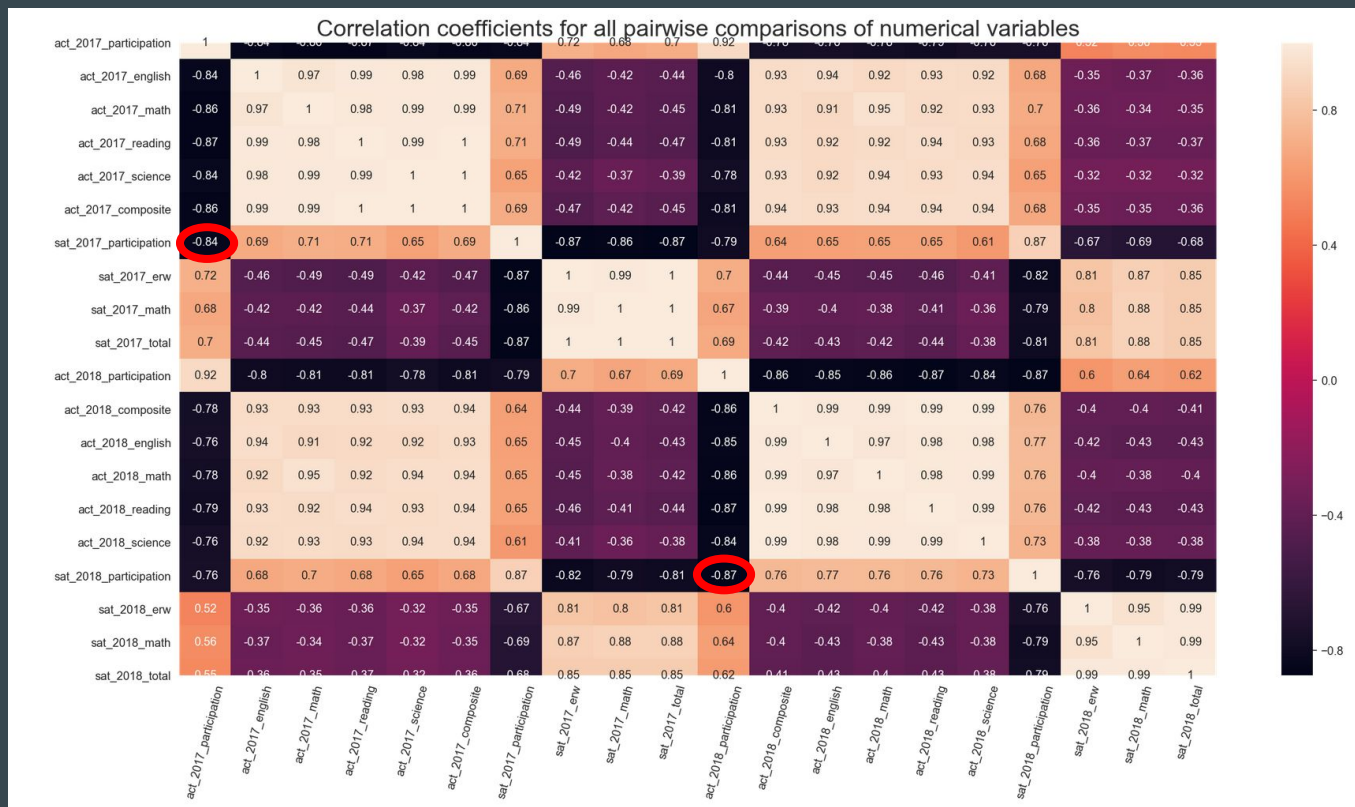
Context and Problem Statement

- The ACT and SAT tests are measures of college readiness and students admission into college.
- In the recent years, the ACT participation percentage of 100% > SAT participation.
- College Board as a non-profit organisation:
 - Connect students to college success
 - Expand access to higher education
- **Aims to increase participation for the SATs.**
 - One of the lowest participation for SAT: **Wisconsin**
 - Lowest participation in both SAT and ACT: **Oregon**

Summary of Analysis

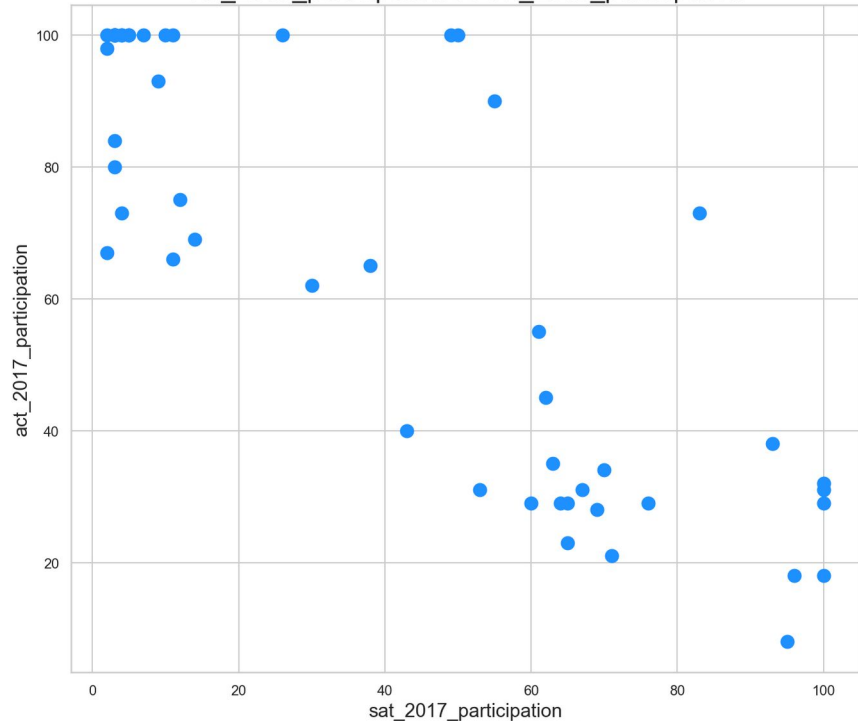
- Distribution of variables: A visual assessment of histograms of each variable showed that they are multimodal distributions. Running the Shapiro-Wilk test on each variable also showed that except for ACT 2017 reading scores, ACT 2017 science scores, and ACT 2018 science scores, which have p values above 0.05, all other variables do not have normal distributions → unable to draw valid conclusions.
 - E.g. multiple clusters of states along spectrum of participation rate
- ACT vs. SAT: participation rates for SAT and ACT are negatively correlated, implying that students who take one test typically do not take the other.
 - e.g. Colorado: jump from 11% to 100% after SAT was mandated and corresponding fall in ACT rates.

Interpretation of Results

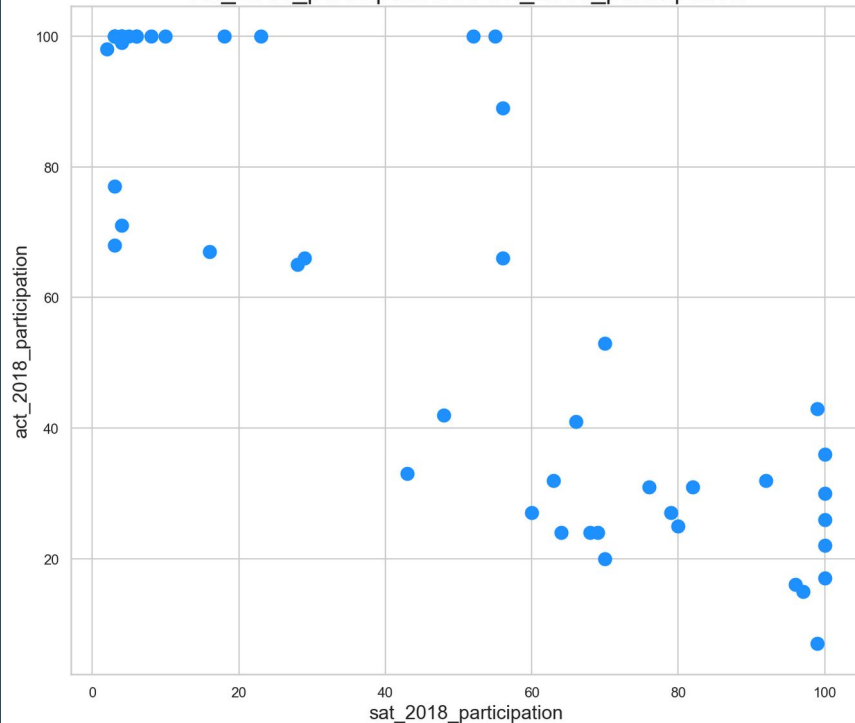


Interpretation of Results

sat_2017_participation vs act_2017_participation

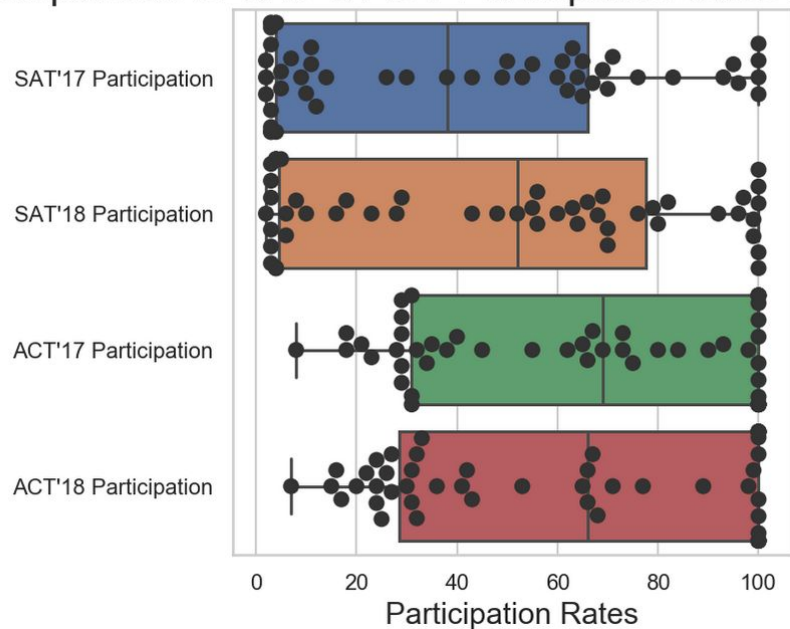


sat_2018_participation vs act_2018_participation



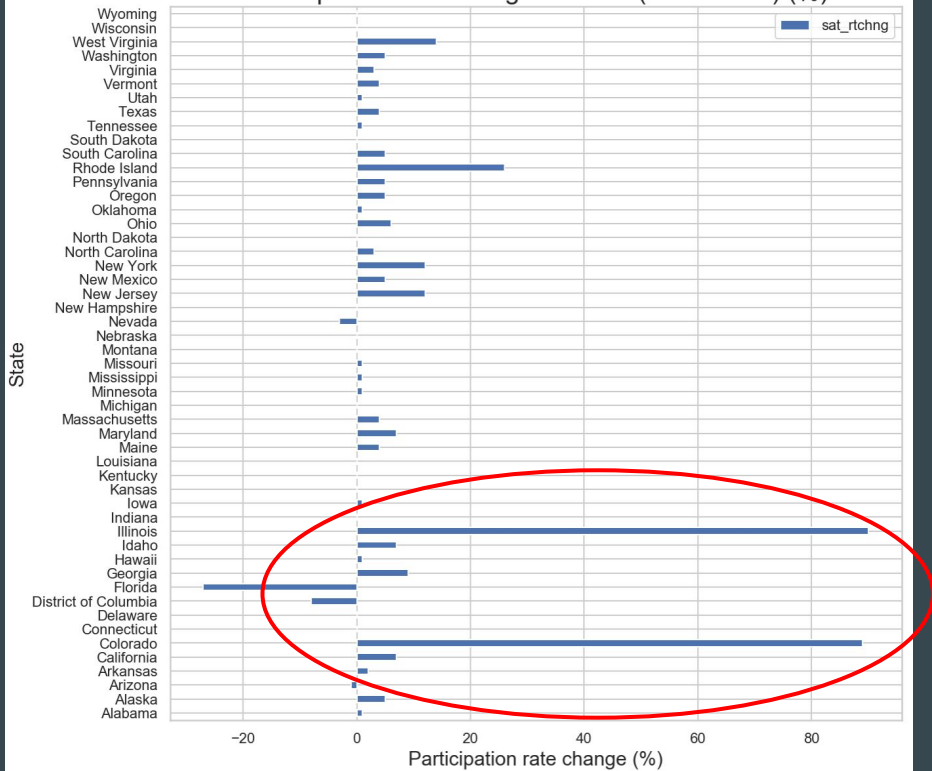
Interpretation of Results

Comparison of SAT & ACT Participation rates in 2017 & 2018

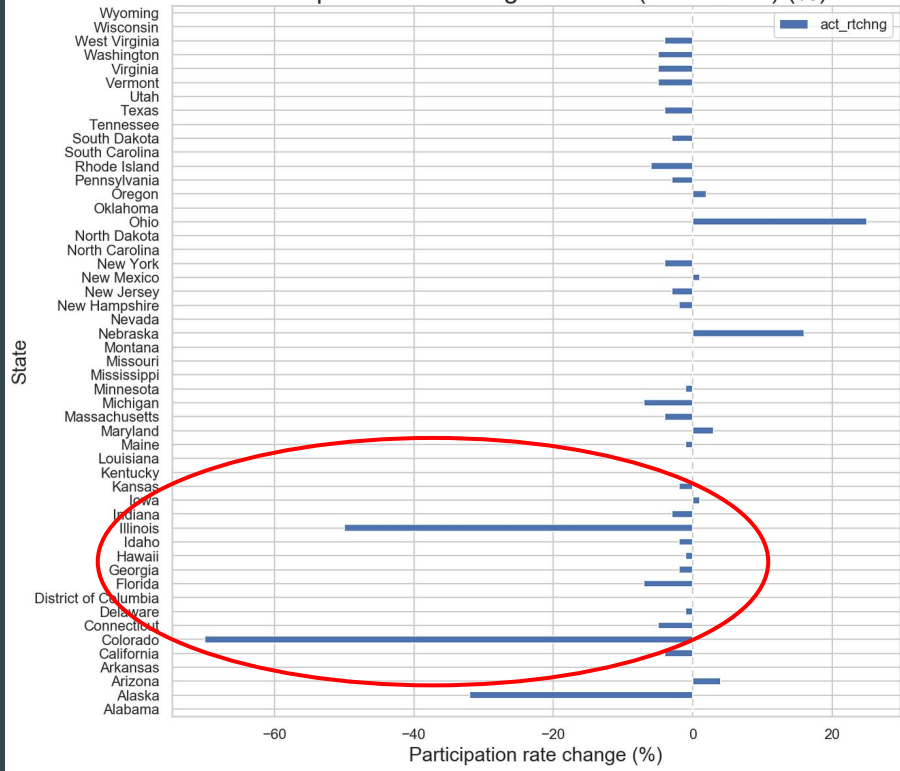


Interpretation of Results

Participation rate change for SAT (2017-2018) (%)



Participation rate change for ACT (2017-2018) (%)



Interpretation of Results

- Significant spike in SAT participation rate 2017-2018
 - Illinois, Colorado, Rhode Island
 - Illinois State Board of Education has ended its contract with ACT as the College Board earlier won a three-year, \$14.3 million bid to give its exam to all public high school juniors in Illinois in 2016
 - In Colorado, the state Department of Education announced in 2015 that a selection committee chose The College Board, makers of the SAT, over the ACT testing company, through a competitive bidding process
 - In 2018, the SATs and PSATs became a graduation requirement, part of the Rhode Island's college admission test

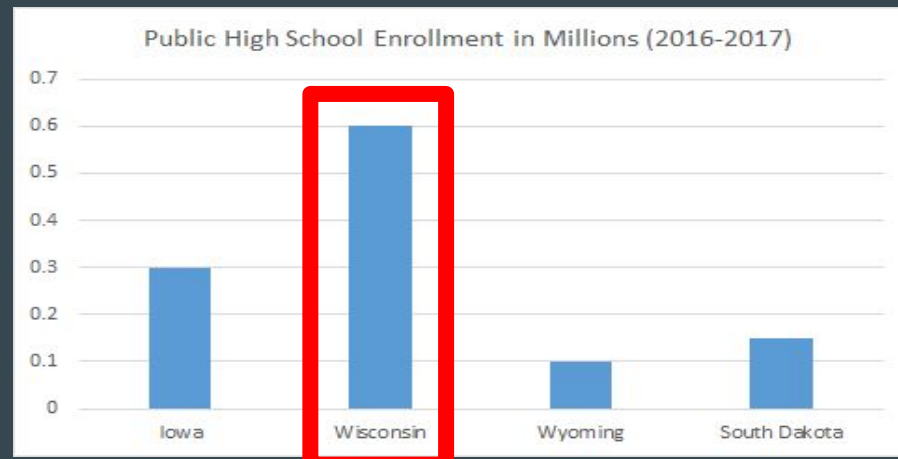
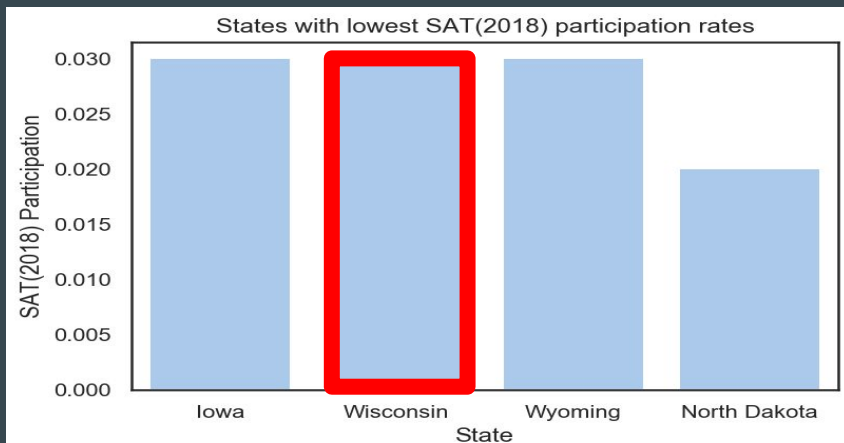
Recommendation - State

Target Wisconsin to achieve significant increase in SAT participation rate

1. Wisconsin mandates student from public schools to take ACT - potential to achieve 100%
2. Wisconsin had the third lowest participation rate (0.03) in 2018
3. Wisconsin's public high school student population was larger than Iowa, North Dakota and Wyoming

(source: <https://educationdata.org/number-of-public-schools/>)

Other possible targets include Oregon which had the lowest combined SAT and ACT participation rates in 2018



Recommendation - Strategy

Win contracts with the Wisconsin Department of Education to make SAT mandatory

- Wisconsin state is likely to prioritise cost reduction over the next few years as the US government has only approved a state budget which was half the amount of what was requested by Wisconsin in 2019 (source: <https://www.wuwm.com/post/budget-compromise-gives-wisconsin-schools-half-funding-boost-evers-wanted#stream/0>)
- The College Board can undercut ACT when Wisconsin's contract with ACT ends and reinvent the success achieved in Colorado and Illinois
- Assumptions: Wisconsin's contract duration with ACT will end in 2020 and Wisconsin will continue to mandate SAT/ACT

Other considerations include offering free SAT to students

Questions?